

- dico: estudo anatômico e implicações cirúrgicas. *Arq Bras Cardiol* 1979;33(suppl 1):334-9.
- 16 Hill RC, Chitwood WR Jr, Bashore TM, Sink JD, Cox JL, Wechsler AS. Coronary flow and regional function before and after supraarterial myotomy for myocardial bridging. *Ann Thorac Surg* 1981;31:176-81.
 - 17 Loures JBL, Souza JEMR, Pimentel WAF, et al. Estudo hemodinâmico e metabólico de pacientes com ponte miocárdica na artéria descendente anterior. *Arq Bras Cardiol* 1978;31:159-65.
 - 18 Porstmann W, Iwig J. Die intramurale Koronarie im Angiogramm. *Fortschr Röntgenstr* 1960;92:129-32.
 - 19 Amplatz K, Anderson R. Angiographic appearance of myocardial bridging of the coronary artery. *Invest Radiol*

- 1968;3:213-5.
- 20 Angelini P, Trivellato M, Donis J, Leachman RD. Myocardial bridges: a review. *Prog Cardiovasc Dis* 1983;26:75-88.
- 21 Ishimori T, Raizner AE, Chahine RA, Awdeh M, Luchi RJ. Myocardial bridges in man: clinical correlations and angiographic accentuation with nitroglycerine. *Cathet Cardiovasc Diagn* 1977;3:59-65.
- 22 Pichard AD, Casanegra P, Marchant E, Rodriguez JA. Abnormal regional myocardial flow in myocardial bridging of the left anterior descending coronary artery. *Am J Cardiol* 1981;47:978-82.
- 23 Carvalho VB, Macruz R, Décourt LV, et al. Hemodynamic determinants of coronary constriction in human myocardial bridges. *Am Heart J* 1984;108:73-80.

PLANTS IN CARDIOLOGY



Royal Botanic Gardens, Kew.

Atropa belladonna L.
Stephenson J, Churchill
JM. *Medical botany*.
London: 1834, volume 1,
plate 1.

Atropine

Atropine is obtained from the leaf and berries of *Atropa belladonna* (Solanaceae), the deadly nightshade, an herbaceous plant of central and southern Europe. It is very poisonous and Linnaeus named it after one of the Fates, Atropus, who cut the thread of life. Though it was popular for deliberate poisoning it was avoided medicinally except for external use. The leaf was used to dilate the pupil for cataract extraction, and as a liniment for rheumatism. A large pupil was once held to enhance female beauty, hence belladonna. Nightshade is a curious word which may allude to the narcotic property of the black berries.

Atropine was isolated in 1831, and in 1867 von Bezold showed that it blocked the cardiac effects of vagal stimulation. Sir James Mackenzie (1853-1925) used it widely in his arrhythmia work. He showed that it would revert partial though not complete heart block. He also studied its effect on the rate in digitalised patients with atrial fibrillation and submitted a paper on this subject to *Heart*. The editor, Thomas Lewis, rejected it and this infuriated Mackenzie who replied "You might as well put upon the forefront of the journal 'No articles will be accepted which are not in accordance with the (temporary) beliefs of the Editor'" (McMichael J, *Journal of the Royal College of General Practitioners* 1981;31:402-6). Atropine was employed with minimal success to prevent Stokes-Adams attacks and it was little used in cardiology until the introduction of cardiopulmonary resuscitation.

The family Solanaceae is distributed worldwide and has over 2000 species, which include tomato, potato, and tobacco. The invaluable drug hyoscine (scopolamine) is found in *Man-dragora officinarum* (mandrake) and in *Datura stramonium* (thornapple). Nowadays atropine and hyoscine are obtained commercially from an Australian tree of this family *Duboisia myoporoides* (corkwood) whose narcotic property was discovered by the aboriginals.

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